bjobs

Displays and filters information about LSF jobs. Specify one or more job IDs (and, optionally, an array index list) to display informatio

Synopsis

bjobs [options] [job_ID | "job_ID**[**index_list**]**" ...]

bjobs -h[**elp**] [**all**] [**description**] [category_name ...] [-option_name ...]

bjobs -V

Categories and options

Use the keyword all to display all options and the keyword description to display a detailed description of the bjobs command. options, specify bjobs -h with the name of the categories and options.

Category: filter
Filter specific types of jobs: -A, -aff, -app, -aps, -fwd, -g, -G, -J, -Jd, -Lp, -m, -N, -P, -q, -sla, -ss, -u.

Category: format
Control the bjobs display format: -aff, -cname, -hostfile, -l, -N, -noheader, -o, -sum, -UF, -w, -W, -WF, -WL, -WP, -X.

Category: state
Display specific job states: -a, -d, -p, -r, -s, -sum, -x.

-A
Displays summarized information about job arrays.

-a
Displays information about jobs in all states, including jobs that finished recently.

-aff
Displays information about jobs with CPU and memory affinity resource requirements for each task in the job.

-app
Displays information about jobs submitted to the specified application profile.

-aps
Displays absolute priority scheduling (APS) information for pending jobs in a queue with APS_PRIORITY enabled.

-cname
In Platform LSF Advanced Edition, includes the cluster name for execution cluster hosts in the output.

-d
Displays information about jobs that finished recently.

-fwd
In MultiCluster job forwarding mode, filters output to display information on forwarded jobs.

-G
Displays jobs associated with the specified user group.

-g
Displays information about jobs attached to the specified job group.

-hostfile
Displays information about a job submitted with a user-specified host file.

-J
Displays information about jobs or job arrays with the specified job name.

-Jd
Displays information about jobs with the specified job description.

-l
Long format. Displays detailed information for each job in a multiline format.

-Lp
Displays jobs that belong to the specified License Scheduler project.

-m

Displays jobs dispatched to the specified hosts.

-N
Displays information about done and exited jobs, also displays the normalized CPU time consumed by the job.

-noheader
Removes the column headings from the output.

-o
Displays information about jobs with CPU and memory affinity resource requirements for each task in the job.

-P
Displays jobs that belong to the specified project.

-p
Displays pending jobs, together with the pending reasons that caused each job not to be dispatched during the last dispatch turn.

-q
Displays jobs in the specified queue.

-r
Displays running jobs.

-s
Displays suspended jobs, together with the suspending reason that caused each job to become suspended.

-sla
Displays jobs belonging to the specified service class.

-ss
Displays summary information for Session Scheduler tasks.

-sum
Displays summary information about unfinished jobs.

-u
Displays jobs that were submitted by the specified users or

user groups.

-UF
Displays unformatted job detail information.

-W
Provides resource usage information for: PROJ_NAME, CPU_USED, MEM, SWAP, PIDS, START_TIME, FINISH_TIME.

-w
Wide format. Displays job information without truncating fields.

-WF
Displays an estimated finish time for running or pending jobs. For done or exited jobs, displays the actual finish time.

-WL
Displays the estimated remaining run time of jobs.

-WP
Displays the current estimated completion percentage of jobs.

-X
Displays uncondensed output for host groups and compute units.

-x
Displays unfinished jobs that have triggered a job exception (overrun, underrun, idle, runtime_est_exceeded).

job_id
Specifies the jobs or job arrays that bjobs displays.

-h
Displays a description of the specified category, command option, or sub-option to stderr and exits.

-V
Prints LSF release version to stderr and exits.

Description
By default, displays information about your own pending,

running, and suspended jobs.

-A

Displays summarized information about job arrays.

Categories

filter

Synopsis

bjobs -A

Description

If you specify job arrays with the job array ID, and also specify -A, do not include the index list with the job array ID.

You can use -w to show the full array specification, if necessary.

Parent topic: bjobs

-a

Displays information about jobs in all states, including jobs that finished recently.

Categories

state

Synopsis

bjobs -a

Description

The finished jobs that -a displays are those that finished within an interval specified by CLEAN_PERIOD in lsb.params (the d

Use -a with -x option to display all jobs that have triggered a job exception (overrun, underrun, idle).

Examples

bjobs -u all -a

Displays all jobs of all users.

Parent topic: bjobs

-aff

Displays information about jobs with CPU and memory affinity resource requirements for each task in the job.

Categories

filter, format

Synopsis

bjobs -aff

Conflicting options

Use only with the -l or -UF option.

Description

If the job is pending, the requested affinity resources are displayed. For running jobs, the effective and combined affinity resou
displayed, along with a table headed AFFINITY that shows detailed memory and CPU binding information for each task, one
finished jobs (EXIT or DONE state), the affinity requirements for the job, and the effective and combined affinity resource req

Use bhist -l -aff to show the actual affinity resource allocation for finished jobs.

Parent topic: bjobs

-app

Displays information about jobs submitted to the specified application profile.

Categories

filter

Synopsis

bjobs -app application_profile_name

Description

You must specify an existing application profile.

Examples

bjobs -app fluent

Displays all jobs belonging to the application profile fluent.

Parent topic: bjobs

-aps

Displays absolute priority scheduling (APS) information for pending jobs in a queue with APS_PRIORITY enabled.

Categories

filter

Synopsis

bjobs -aps

Description

The APS value is calculated based on the current scheduling cycle, so jobs are not guaranteed to be dispatched in this order.

Pending jobs are ordered by APS value. Jobs with system APS values are listed first, from highest to lowest APS value. Jobs w
ordered from high to low value. Finally, jobs not in an APS queue are listed. Jobs with equal APS values are listed in order of
an APS queue are shown with a dash (-).

If queues are configured with the same priority, bjobs -aps may not show jobs in the correct expected dispatch order. Jobs may
configured in lsb.queues. You should avoid configuring queues with the same priority.

For resizable jobs, -aps displays the latest APS information for running jobs with active resize allocation requests. LSF handle
active resize requests. The displayed job priority can change from time to time.

Parent topic: bjobs

-cname

In Platform LSF Advanced Edition, includes the cluster name for execution cluster hosts in the output.

Categories

format

Synopsis

bjobs -cname

Examples

```
% bjobs -l -cname
Job <1>, User <lsfuser>, Project <default>, Status <RUN>, Queue <queue1>,
Command <myjob>
Mon Nov 29 14:08:35: Submitted from host <hostA>, CWD </home/lsfuser>,
                     Re-runnable;
Mon Nov 29 14:08:38: Job <1> forwarded to cluster <cluster3>;
Mon Nov 29 14:08:44: Started on <hostC@cluster3>, Execution Home
                     </home/lsfuser>, Execution CWD </home/lsfuser>;
Mon Nov 29 14:08:46: Resource usage collected.
 MEM: 2 Mbytes;  SWAP: 32 Mbytes;  NTHREAD: 1
 PGID: 6395;  PIDs: 6395

SCHEDULING PARAMETERS:
          r15s r1m  r15m ut pg io ls it tmp swp mem
 loadSched -    -   -   - - - - - - - -
 loadStop  -    -   -   - - - - - - - -
 ...
```

Parent topic: bjobs

-d

Displays information about jobs that finished recently.

Categories

state

Synopsis

bjobs -d

Description

The finished jobs that -d displays are those that finished within an interval specified by CLEAN_PERIOD in lsb.params (the d

Examples

bjobs -d -q short -m hostA -u user1

Displays all the recently finished jobs submitted by user1 to the queue short, and executed on the host hostA.

Parent topic: bjobs

-fwd

In MultiCluster job forwarding mode, filters output to display information on forwarded jobs.

Categories

filter

Synopsis

bjobs -fwd

Conflicting options

Do not use with the following options: -A, -d, -sla, -ss, -x.

Description

In MultiCluster job forwarding mode, filters output to display information on forwarded jobs, including the forwarded time an
was forwarded. -fwd can be used with other options to further filter the results. For example, bjobs -fwd -r displays only forwa

To use -x to see exceptions on the execution cluster, use bjobs -m *execution_cluster* -x.

Examples

```
% bjobs -fwd
JOBID USER    STAT QUEUE  EXEC_HOST JOB_NAME   CLUSTER  FORWARD_TIME
123   lsfuser RUN  queue1 hostC     sleep 1234 cluster3 Nov 29 14:08
```

Parent topic: bjobs

-G

Displays jobs associated with the specified user group.

Categories

filter

Synopsis

bjobs -G user_group

Conflicting options

Do not use with the -u option.

Description

Only displays jobs associated with a user group submitted with bsub -G for the specified user group. The -G option does not d
fied user group. Jobs associated with the user group at submission are displayed, even if they are later switched to a different u

You can only specify a user group name. The keyword all is not supported for -G.

Parent topic: bjobs

-g

Displays information about jobs attached to the specified job group.

Categories

filter

Synopsis

bjobs -g job_group_name

Description

Use -g with -sla to display job groups attached to a time-based service class. Once a job group is attached to a time-based serv subject to the SLA.

bjobs -l with -g displays the full path to the group to which a job is attached.

Examples

bjobs -g /risk_group

```
JOBID  USER   STAT  QUEUE     FROM_HOST   EXEC_HOST   JOB_NAME   SUBMIT_TIME
113    user1  PEND  normal    hostA                   myjob      Jun 17 16:15
111    user2  RUN   normal    hostA       hostA       myjob      Jun 14 15:13
110    user1  RUN   normal    hostB       hostA       myjob      Jun 12 05:03
104    user3  RUN   normal    hostA       hostC       myjob      Jun 11 13:18
```

To display the full path to the group to which a job is attached, run bjobs -l -g:

```
bjobs -l -g /risk_group
Job <101>, User <user1>, Project <default>, Job Group </risk_group>,
   Status <RUN>, Queue <normal>, Command <myjob>
Tue Jun 17 16:21:49 2009: Submitted from host <hostA>, CWD </home/user1;
Tue Jun 17 16:22:01 2009: Started on <hostA>;
 ...
```

Parent topic: bjobs

-hostfile

Displays information about a job submitted with a user-specified host file.

Categories

format

Synopsis

bjobs -l | **-UF** [**-hostfile**]

Conflicting options

Use only with the -l or -UF option.

Description

If a job was submitted with bsub -hostfile or modified with bmod -hostfile to point to a user-specified host file, use -hostfile to as the contents of the host file.

Use -hostfile together with -l or -UF, to view the user specified host file content as well as the host allocation for a given job.

Example

Use -l -hostfile to display a user-specified host file that was submitted with a job or added to a job.

For example:

```
bjobs -l -hostfile  2012
Job <2012>, User <userG>, Project <myproject>, Status <PEND>, Queue
                  <normal>, Commnad <sleep 10000>
                  Thu Aug 1 12:43:25: Submitted from host <host10a>,
                  CWD <$HOME>,Host file </home/userG/myhostfile>;

 ......

USER-SPECIFIED HOST FILE:
HOST        SLOTS
host01      3
host02      1
host01      1
host02      2
host03      1
```

Parent topic: bjobs

-J

Displays information about jobs or job arrays with the specified job name.

Categories

filter

Synopsis

bjobs -J job_name

Description

Only displays jobs that were submitted by the user running this command.

The job name can be up to 4094 characters long. Job names are not unique.

The wildcard character (*) can be used anywhere within a job name, but cannot appear within array indices. For example job* returns the first element in all job arrays with names containing AAA, however job1[*] will not return anything since the wild

Parent topic: bjobs

-Jd

Displays information about jobs with the specified job description.

Categories

filter

Synopsis

bjobs -Jd job_description

Description

Only displays jobs that were submitted by the user running this command.

The job description can be up to 4094 characters long. Job descriptions are not unique.

The wildcard character (*) can be used anywhere within a job description.

Parent topic: bjobs

-l

Long format. Displays detailed information for each job in a multiline format.

Categories

format

Synopsis

bjobs -l

Description

The -l option displays the following additional information: project name, job command, current working directory on the sub
checkpoint directory, migration threshold, pending and suspending reasons, job status, resource usage, resource usage limits in
tion on the execution hosts, and job description.

If the job was submitted with bsub -K, the -l option displays Synchronous Execution.

Use bjobs -A -l to display detailed information for job arrays including job array job limit (% *job_limit*) if set.

Use bjobs -ss -l to display detailed information for session scheduler jobs.

If JOB_IDLE is configured in the queue, use bjobs -l to display job idle exception information.

If you submitted your job with the -U option to use advance reservations created with the brsvadd command, bjobs -l shows th

If LSF_HPC_EXTENSIONS="SHORT_PIDLIST" is specified in lsf.conf, the output from bjobs is shortened to display only t
IDs (PGIDs) and process IDs for the job. Without SHORT_PIDLIST, all of the process IDs (PIDs) for a job are displayed.

If LSF_HPC_EXTENSIONS="HOST_RUSAGE" is specified in lsf.conf, the output from bjobs -l reports the correct rusage ba
charged to the execution host.

If you submitted a job with multiple resource requirement strings using the bsub -R option for the order, same, rusage, and sel
merged resource requirement string for those sections, as if they were submitted using a single -R.

If you submitted a job using the OR (||) expression to specify alternative resources, this option displays the Execution rusage s

Predicted start time for PEND reserve job will not be shown with bjobs -l. LSF does not calculate predicted start time for PEN
ured in the system. In that case, resource reservation for PEND jobs works as normal, and no predicted start time is calculated

For resizable jobs, the -l option displays active pending resize allocation requests, and the latest job priority for running jobs w

For jobs with user-based fairshare scheduling, displays the charging SAAP (share attribute account path).

For jobs submitted to an absolute priority scheduling (APS) queue, -l shows the ADMIN factor value and the system APS valu
for the job.

For jobs submitted with SSH X11 forwarding, displays that the job was submitted in SSH X11 forwarding mode as well as the
LSB_SSH_XFORWARD_CMD in lsf.conf.)

If the job was auto-attached to a guarantee SLA, -l displays the auto-attached SLA name.

Specified CWD shows the value of the bsub -cwd option or the value of **LSB_JOB_CWD**. The CWD path with pattern values
tory where bsub ran. If specified CWD was not defined, this field is not shown. The execution CWD with pattern values is alw

If the job was submitted with an energy policy, to automatically select a CPU frequency, -l will show the Combined CPU frequ
job based on the energy policy tag, energy policy and threshold file). If the job was submitted with a user defined CPU frequen
ified CPU frequency for the job.

Examples

bjobs -pl

Displays detailed information about all pending jobs of the invoker.

Parent topic: bjobs

-Lp

Displays jobs that belong to the specified License Scheduler project.

Categories

filter

Synopsis

bjobs -Lp ls_project_name

Parent topic: bjobs

-m

Displays jobs dispatched to the specified hosts.

Categories

filter

Synopsis

bjobs -m host_name ... | **-m** host_group ... | **-m** cluster_name ...

Description

To see the available hosts, use bhosts.

If a host group or compute unit is specified, displays jobs dispatched to all hosts in the group. To determine the available host g
available compute units, use bmgroup -cu.

With MultiCluster, displays jobs in the specified cluster. If a remote cluster name is specified, you see the remote job ID, even
cluster. To determine the available clusters, use bclusters.

Examples

bjobs -d -q short -m hostA -u user1

Displays all the recently finished jobs submitted by user1 to the queue short, and executed on the host hostA.

Parent topic: bjobs

-N

Displays information about done and exited jobs, also displays the normalized CPU time consumed by the job.

Categories

filter, format, state

Synopsis

bjobs -N host_name | **-N** host_model | **-N** cpu_factor

Description

Normalizes using the CPU factor specified, or the CPU factor of the host or host model specified.

Use with -p, -r, and -s to show information about pending, running, and suspended jobs along with done and exited jobs.

Parent topic: bjobs

-noheader

Removes the column headings from the output.

Categories

format

Synopsis

bjobs -noheader

Description

When specified, bjobs displays the values of the fields without displaying the names of the fields. This is useful for script parsi
sary.

This option applies to output for the bjobs command with no options, and to output for all bjobs options with short form outpu

Parent topic: bjobs

-o

Displays information about jobs with CPU and memory affinity resource requirements for each task in the job.

Categories

format

Synopsis

bjobs -o "field_name[**:**[-][output_width]] ... [**delimiter=**'character']"

bjobs -o 'field_name[**:**[-][output_width]] ... [**delimiter=**"character"]'

Description

Sets the customized output format.

* Specify which bjobs fields (or aliases instead of the full field names), in which order, and with what width to display.

* Specify only the bjobs field name or alias to set its output to unlimited width and left justification.

* Specify the colon (:) without a width to set the output width to the recommended width for that field.

* Specify the colon (:) with a width to set the maximum number of characters to display for the field. When its value exceeds this width, bjobs truncates the output as follows:

  * For the JOB_NAME field, bjobs removes the header characters and replaces them with an asterisk (*)

  * For other fields, bjobs truncates the ending characters

* Specify a hyphen (-) to set right justification when displaying the output for the specific field. If not specified, the default is to set left justification when displaying output for a field.

* Use delimiter= to set the delimiting character to display between different headers and fields. This must be a single character. By default, the delimiter is a space.

To specify special delimiter characters in a csh environment (for example, $), use double quotation marks (") in the delimiter s
the -o statement:

bjobs ... -o '*field_name*[:[-][*output_width*]]
... [delimiter="*character*"]'

The -o option only applies to output for certain bjobs options, as follows:

* This option applies to output for the bjobs command with no options, and for bjobs options with short form output that filter information, including the following: -a, -app, -cname, -d, -g, -G, -J, -Jd, -Lp, -m, -P, -q, -r, -sla, -u, -x, -X.

* This option applies to output for bjobs options that use a modified format and filter information, including the following: -fwd, -N, -p, -s.

* This option does not apply to output for bjobs options that use a modified format, including the following: -A, -aff, -aps, -l, -UF, -ss, -sum, -UF, -w, -W, -WF, -WL, -WP.

The bjobs -o option overrides the **LSB_BJOBS_FORMAT** environment variable, which overrides the **LSB_BJOBS_FORM**

The following are the field names used to specify the bjobs fields to display, recommended width, aliases you can use instead o
the displayed field:

Table 1. Output fields for bjobs

Field name	Width	Aliases	Unit	Category
jobid	7	id		Common
stat	5			
user	7			
user_group	15	ugroup		
queue	10			
job_name	10	name		

job_description	17	descript		
		ion		
proj_name	11	proj,		
		project		
application	13	app		
service_class	13	sla		
job_group	10	group		
job_priority	12	priority		
dependency	15			

command	15	cmd		Comman
				d
pre_exec_command	16	pre_cmd		
post_exec_command	17	post_cmd		
resize_notificatio	27	resize_c		
n_command		md		
pids	20			
exit_code	10			
exit_reason	50			

from_host	11		Host
first_host	11		
exec_host	11		
nexec_host	10		
Note: If the allocated host group or compute unit is condensed, this field does not display the real number of hosts. Use bjobs -X -o to view the real number of hosts in these situations.			
alloc_slot	20		
nalloc_slot	10		

host_file	10			
submit_time	15			Time
start_time	15			
estimated_start_time	20	estart_t ime		
specified_start_time	20	sstart_t ime		
specified_terminate_time	24	stermina te_time		
time_left	11		seconds	
finish_time	16			
%complete	11			
warning_action	15	warn_act		
action_warning_time	19	warn_tim e		
cpu_used	10			CPU
run_time	15		seconds	
idle_factor	11			
exception_status	16	except_s tat		
slots	5			
mem	10		LSF_UNIT_FOR _LIMITS in lsf.conf (KB by default)	
max_mem	10		LSF_UNIT_FOR _LIMITS in lsf.conf (KB by default)	
avg_mem	10		LSF_UNIT_FOR _LIMITS in lsf.conf (KB by default)	
memlimit	10		LSF_UNIT_FOR	

		_LIMITS in lsf.conf (KB by default)	
swap	10	LSF_UNIT_FOR _LIMITS in lsf.conf (KB by default)	
swaplimit	10	LSF_UNIT_FOR _LIMITS in lsf.conf (KB by default)	
min_req_proc	12		Resource
max_req_proc	12		
effective_resreq	17	eresreq	
network_req	15		
filelimit	10		Resource
corelimit	10		
stacklimit	10		
processlimit	12		
input_file	10		File
output_file	11		
error_file	10		
output_dir	15		Directory
sub_cwd	10		
exec_home	10		
exec_cwd	10		
forward_cluster	15	fwd_cluster	MultiCluster
forward_time	15	fwd_time	

Field names and aliases are not case sensitive. Valid values for the output width are any positive integer between 1 and 4096. I
width and **LSB_JOBID_DISP_LENGTH** is defined in lsf.conf, the **LSB_JOBID_DISP_LENGTH** value is used for the out
fied output width, the specified output width overrides the **LSB_JOBID_DISP_LENGTH** value.

For example,

Examples

bjobs -o "jobid stat: queue:- project:10 application:-6 delimiter='^'" 123

This command (used to illustrate the different subcommands for -o) displays the following fields for a job with the job ID 123

* JOBID with unlimited width and left justified. If LSB_JOBID_DISP_LENGTH is specified, that value is used for the output width instead.

* STAT with a maximum width of five characters (which is the recommended width) and left justified.

* QUEUE with a maximum width of ten characters (which is the recommended width) and right justified.

* PROJECT with a maximum width of ten characters and left justified.

* APPLICATION with a maximum width of six characters and right justified.

* The ^ character is displayed between different headers and fields.

Parent topic: bjobs

-P

Displays jobs that belong to the specified project.

Categories

filter

Synopsis

bjobs -P project_name

Parent topic: bjobs

-p

Displays pending jobs, together with the pending reasons that caused each job not to be dispatched during the last dispatch tur

Categories

state

Synopsis

bjobs -p

Description

The pending reason shows the number of hosts for that reason, or names the hosts if -l is also specified.

With MultiCluster, -l shows the names of hosts in the local cluster.

Each pending reason is associated with one or more hosts and it states the cause why these hosts are not allocated to run the jo
cific hosts (using bsub -m), users may see reasons for unrelated hosts also being displayed, together with the reasons associate

In case of host-based pre-execution failure, pending reasons will be displayed.

The life cycle of a pending reason ends after the time indicated by **PEND_REASON_UPDATE_INTERVAL** in lsb.params.

When the job slot limit is reached for a job array (bsub -J "jobArray[indexList]%job_slot_limit") the following message is dis

The job array has reached its job slot limit.

Examples

bjobs -pl

Displays detailed information about all pending jobs of the invoker.

bjobs -ps

Display only pending and suspended jobs.

Parent topic: bjobs

-q

Displays jobs in the specified queue.

Categories

filter

Synopsis

bjobs -q queue_name

Description

The command bqueues returns a list of queues configured in the system, and information about the configurations of these que

In MultiCluster, you cannot specify remote queues.

Examples

bjobs -d -q short -m hostA -u user1

Displays all the recently finished jobs submitted by user1 to the queue short, and executed on the host hostA.

Parent topic: bjobs

-r

Displays running jobs.

Categories

state

Synopsis

bjobs -r

Parent topic: bjobs

-s

Displays suspended jobs, together with the suspending reason that caused each job to become suspended.

Categories

state

Synopsis

bjobs -s

Description

The suspending reason may not remain the same while the job stays suspended. For example, a job may have been suspended rate dropped another load index could prevent the job from being resumed. The suspending reason is updated according to the the time interval specified by **SBD_SLEEP_TIME** in lsb.params. The reasons shown may not reflect the current load situatio

Examples

bjobs -ps

Display only pending and suspended jobs.

Parent topic: bjobs

-sla

Displays jobs belonging to the specified service class.

Categories

filter

Synopsis

bjobs -sla service_class_name

Description

bjobs also displays information about jobs assigned to a default SLA configured with ENABLE_DEFAULT_EGO_SLA in lsb

Use -sla with -g to display job groups attached to a time-based service class. Once a job group is attached to a service class, al the SLA.

Use bsla to display the configuration properties of service classes configured in lsb.serviceclasses, the default SLA configured about the state of each service class.

Examples

bjobs -sla Sooke

Displays all jobs belonging to the service class Sooke.

Parent topic: bjobs

-ss

Displays summary information for Session Scheduler tasks.

Categories

filter

Synopsis

bjobs -ss

Conflicting options

Do not use with the following options: -A, -aps, -fwd, -N, -W, -WL, -WF, -WP.

Description

Displays summary information for Session Scheduler tasks including the job ID, the owner, the job name (useful for job array
pending, done, running, and exited session scheduler tasks.

-ss can only display the summary information for Session Scheduler tasks when the job session has started . -ss cannot displa
job is still pending.

The frequency of the updates of this information is based on the parameters **SSCHED_UPDATE_SUMMARY_INTERVAL**
MARY_BY_TASK.

Parent topic: bjobs

-sum

Displays summary information about unfinished jobs.

Categories

state, format

Synopsis

bjobs -sum

Description

bjobs -sum displays the count of job slots in the following states: running (RUN), system suspended (SSUSP), user suspended
remote clusters and pending (FWD_PEND), and UNKNOWN.

bjobs -sum displays the job slot count only for the users own jobs.

Use -sum with other options (like -m, -P, -q, and -u) to filter the results. For example, bjobs -sum -u user1 displays job slot cou

Examples

```
% bjobs -sum
RUN     SSUSP     USUSP     UNKNOWN   PEND     FWD_PEND
123     456       789       5         5        3
```

To filter the -sum results to display job slot counts just for user user1, run bjobs -sum -u user1:

```
% bjobs -sum -u user1
RUN     SSUSP     USUSP     UNKNOWN   PEND     FWD_PEND
20      10        10        0         5        0
```

Parent topic: bjobs

-u

Displays jobs that were submitted by the specified users or user groups.

Categories

filter

Synopsis

bjobs -u user_name ... | **-u** user_group ... | **-u all**

Conflicting options

Do not use with the -G option.

Description

The keyword all specifies all users. To specify a Windows user account, include the domain name in uppercase letters and use
(*DOMAIN_NAME*\fIuser_name) in a Windows command line or a double backslash (*DOMAIN_NAME\user_name*) in a UNIX

Examples

bjobs -u all -a

Displays all jobs of all users.

bjobs -d -q short -m hostA -u user1

Displays all the recently finished jobs submitted by user1 to the queue short, and executed on the host hostA.

Parent topic: bjobs

-UF

Displays unformatted job detail information.

Categories

format

Synopsis

bjobs -UF

Description

This makes it easy to write scripts for parsing keywords on bjobs. The results of this option have no wide control for the outpu
line. Information for **SCHEDULING PARAMETERS** and **PENDING REASONS** remain formatted. The resource usage m
have a semicolon added to separate their different parts. The first line and all lines starting with the time stamp are displayed u
length and format control.

Examples

```
% bjobs -UF
Job <1>, User <lsfuser>, Project <default>, Status <RUN>, Queue <normal>, Command <./pi_css5 10000000>, Share group
Tue May  6 15:45:10: Submitted from host <hostA>, CWD </home/lsfuser>;
Tue May  6 15:45:11: Started on <hostB>, Execution Home </home/lsfuser>, Execution CWD </home/lsfuser>;

 SCHEDULING PARAMETERS:
        r15s   r1m  r15m   ut      pg    io   ls    it    tmp    swp    mem
 loadSched  -    -    -    -       -     -    -     -     -      -      -
 loadStop   -    -    -    -       -     -    -     -     -      -      -

 RESOURCE REQUIREMENT DETAILS:
 Combined: select[type == local] order[r15s:pg]
 Effective: select[type == local] order[r15s:pg]
```

Parent topic: bjobs

-W

Provides resource usage information for: PROJ_NAME, CPU_USED, MEM, SWAP, PIDS, START_TIME, FINISH_TIME.

Categories

format

Synopsis

bjobs -W

Description

Displays resource information for jobs that belong to you only if you are not logged in as an administrator.

Parent topic: bjobs

-w

Wide format. Displays job information without truncating fields.

Categories

format

Synopsis

bjobs -w

Parent topic: bjobs

-WF

Displays an estimated finish time for running or pending jobs. For done or exited jobs, displays the actual finish time.

Categories

format

Synopsis

bjobs -WF

Output

The output for the -WF, -WL, and -WP options are in the following format:

hours:*minutes status*

where *status* is one of the following:

* X: The real run time has exceeded the estimated run time configured in the application profile (**RUNTIME** parameter in lsb.applications) or at the job level (bsub -We option).

* L: A run limit exists but the job does not have an estimated run time.

* E: An estimated run time exists and has not been exceeded.

Parent topic: bjobs

-WL

Displays the estimated remaining run time of jobs.

Categories

format

Synopsis

bjobs -WL

Output

The output for the -WF, -WL, and -WP options are in the following format:

hours:*minutes status*

where *status* is one of the following:

* X: The real run time has exceeded the estimated run time configured in the application profile (**RUNTIME** parameter in lsb.applications) or at the job level (bsub -We option).

* L: A run limit exists but the job does not have an estimated run time.

* E: An estimated run time exists and has not been exceeded.

Parent topic: bjobs

-WP

Displays the current estimated completion percentage of jobs.

Categories

format

Synopsis

bjobs -WP

Output

The output for the -WF, -WL, and -WP options are in the following format:

hours:*minutes status*

where *status* is one of the following:

* X: The real run time has exceeded the estimated run time configured in the application profile (**RUNTIME** parameter in lsb.applications) or at the job level (bsub -We option).

* L: A run limit exists but the job does not have an estimated run time.

* E: An estimated run time exists and has not been exceeded.

Parent topic: bjobs

-X

Displays uncondensed output for host groups and compute units.

Categories

format

Synopsis

bjobs -X

Examples

bjobs -X 101 102 203 509

Display jobs with job ID 101, 102, 203, and 509 as uncondensed output even if these jobs belong to hosts in condensed groups

Parent topic: bjobs

-x

Displays unfinished jobs that have triggered a job exception (overrun, underrun, idle, runtime_est_exceeded).

Categories

state

Synopsis

bjobs -x

Description

Use with the -l option to show the actual exception status. Use with -a to display all jobs that have triggered a job exception.

Parent topic: bjobs

job_id

Specifies the jobs or job arrays that bjobs displays.

Synopsis

bjobs [options] [job_id | "job_id**[**index_list**]"** ...]

Description

If you use -A, specify job array IDs without the index list.

In MultiCluster job forwarding mode, you can use the local job ID and cluster name to retrieve the job details from the remote

bjobs *submission_job_id@submission_cluster_name*

For job arrays, the query syntax is:

bjobs "*submission_job_id*[*index*]"*@submission_cluster_name*

The advantage of using submission_job_id@submission_cluster_name instead of bjobs -l job_id is that you can use submissio alias to query a local job in the execution cluster without knowing the local job ID in the execution cluster. The bjobs output is (local job ID or *submission_job_id@submission_cluster_name*).

You can use bjobs 0 to find all jobs in your local cluster, but bjobs 0@submission_cluster_name is not supported.

Examples

bjobs 101 102 203 509

Display jobs with job_ID 101, 102, 203, and 509.

bjobs -X 101 102 203 509

Display jobs with job ID 101, 102, 203, and 509 as uncondensed output even if these jobs belong to hosts in condensed groups

Parent topic: bjobs

-h

Displays a description of the specified category, command option, or sub-option to stderr and exits.

Synopsis

bjobs -h[**elp**] [category ...] [option ...]

Description

You can abbreviate the -help option to -h.

Run bjobs -h (or bjobs -help) without a command option or category name to display the bjobs command description.

Examples

bjobs -h filter

Displays a description of the filter category and the bjobs command options belonging to this category.

bjobs -h -o

Displays a detailed description of the bjobs -o option.

Parent topic: bjobs

-V

Prints LSF release version to stderr and exits.

Synopsis

bjobs -V

Conflicting options

Do not use with any other option except -h (bjobs -h -V).

Parent topic: bjobs

Description

By default, displays information about your own pending, running, and suspended jobs.

bjobs displays output for condensed host groups and compute units. These host groups and compute units are defined by CON
section of lsb.hosts. These groups are displayed as a single entry with the name as defined by GROUP_NAME or NAME in ls
uncondensed output.

If you defined LSB_SHORT_HOSTLIST=1 in lsf.conf, parallel jobs running in the same condensed host group or compute un

For resizable jobs, bjobs displays the autoresizable attribute and the resize notification command.

To display older historical information, use bhist.

Output: Default Display

Pending jobs are displayed in the order in which they are considered for dispatch. Jobs in higher priority queues are displayed
ing jobs in the same priority queues are displayed in the order in which they were submitted but this order can be changed by u
than one job is dispatched to a host, the jobs on that host are listed in the order in which they are considered for scheduling on
patch times. Finished jobs are displayed in the order in which they were completed.

A listing of jobs is displayed with the following fields:

JOBID
The job ID that LSF assigned to the job.

USER
The user who submitted the job.

STAT
The current status of the job (see JOB STATUS below).

QUEUE
The name of the job queue to which the job belongs. If the queue to which the job belongs has been removed from the configuration, the queue name is displayed as lost_and_found. Use bhist to get the original queue name. Jobs in the lost_and_found queue remain pending until they are switched with the bswitch command into another queue.

In a MultiCluster resource leasing environment, jobs scheduled by the consumer cluster display the remote queue name in the format

queue_name@cluster_name. By default, this field truncates at 10 characters, so you might not see the cluster name unless you use -w or -l.

FROM_HOST

The name of the host from which the job was submitted.

With MultiCluster, if the host is in a remote cluster, the cluster name and remote job ID are appended to the host name, in the format *host_name@cluster_name*:*job_ID*. By default, this field truncates at 11 characters; you might not see the cluster name and job ID unless you use -w or -l.

EXEC_HOST

The name of one or more hosts on which the job is executing (this field is empty if the job has not been dispatched). If the host on which the job is running has been removed from the configuration, the host name is displayed as lost_and_found. Use bhist to get the original host name.

If the host is part of a condensed host group or compute unit, the host name is displayed as the name of the condensed group.

If you configure a host to belong to more than one condensed host groups using wildcards, bjobs can display any of the host groups as execution host name.

JOB_NAME

The job name assigned by the user, or the command string assigned by default at job submission with bsub. If the job name is too long to fit in this field, then only the latter part of the job name is displayed.

The displayed job name or job command can contain up to 4094 characters for UNIX, or up to 255 characters for Windows.

SUBMIT_TIME

The submission time of the job.

Output: Long format (-l)

The -l option displays a long format listing with the following additional fields:

Job
The job ID that LSF assigned to the job.

User
The ID of the user who submitted the job.

Project
The project the job was submitted from.

Application Profile
The application profile the job was submitted to.

Command
The job command.

CWD
The current working directory on the submission host.

Execution CWD
The actual CWD used when job runs.

Host file
The path to a user-specified host file used when submitting or modifying a job.

Initial checkpoint period
The initial checkpoint period specified at the job level, by bsub -k, or in an application profile with CHKPNT_INITPERIOD.

Checkpoint period
The checkpoint period specified at the job level, by bsub -k, in the queue with CHKPNT, or in an application profile with CHKPNT_PERIOD.

Checkpoint directory
The checkpoint directory specified at the job level, by bsub -k, in the queue with CHKPNT, or in an application profile with CHKPNT_DIR.

Migration threshold
The migration threshold specified at the job level, by bsub -mig.

Post-execute Command
The post-execution command specified at the job-level, by bsub -Ep.

PENDING REASONS
The reason the job is in the PEND or PSUSP state. The names of the hosts associated with each reason are displayed when both -p and -l options are specified.

SUSPENDING REASONS
The reason the job is in the USUSP or SSUSP state.

loadSched
The load scheduling thresholds for the job.

loadStop
The load suspending thresholds for the job.

JOB STATUS
Possible values for the status of a job include:

PEND
The job is pending. That is, it has not yet been started.

PROV
The job has been dispatched to a power-saved host that is waking up. Before the job can be sent to the sbatchd, it is in a PROV state.

PSUSP
The job has been suspended, either by its owner or the LSF administrator, while pending.

RUN
The job is currently running.

USUSP
The job has been suspended, either by its owner or the LSF administrator, while running.

SSUSP

The job has been suspended by LSF. The job has been suspended by LSF due to either of the following two causes:

* The load conditions on the execution host or hosts have exceeded a threshold according to the loadStop vector defined for the host or queue.

* The run window of the job's queue is closed. See bqueues(1), bhosts(1), and lsb.queues(5).

DONE

The job has terminated with status of 0.

EXIT

The job has terminated with a non-zero status - it may have been aborted due to an error in its execution, or killed by its owner or the LSF administrator.

For example, exit code 131 means that the job exceeded a configured resource usage limit and LSF killed the job.

UNKWN

mbatchd has lost contact with the sbatchd on the host on which the job runs.

WAIT

For jobs submitted to a chunk job queue, members of a chunk job that are waiting to run.

ZOMBI

A job becomes ZOMBI if:

* A non-rerunnable job is killed by bkill while the sbatchd on the execution host is unreachable and the job is shown as UNKWN.

* The host on which a rerunnable job is running is unavailable and the job has been requeued by LSF with a new job ID, as if the

job were submitted as a new job.

* After the execution host becomes available, LSF tries to kill the ZOMBI job. Upon successful termination of the ZOMBI job, the job's status is changed to EXIT.

With MultiCluster, when a job running on a remote execution cluster becomes a ZOMBI job, the execution cluster treats the job the same way as local ZOMBI jobs. In addition, it notifies the submission cluster that the job is in ZOMBI state and the submission cluster requeues the job.

RUNTIME

Estimated run time for the job, specified by bsub -We or bmod -We, -We+, -Wep.

The following information is displayed when running bjobs -WL, -WF, or -WP.

TIME_LEFT

The estimated run time that the job has remaining. Along with the time if applicable, one of the following symbols may also display.

* E: The job has an estimated run time that has not been exceeded.

* L: The job has a hard run time limit specified but either has no estimated run time or the estimated run time is more than the hard run time limit.

* X: The job has exceeded its estimated run time and the time displayed is the time remaining until the job reaches its hard run time limit.

* A dash indicates that the job has no estimated run time and no run limit, or that it has exceeded its run time but does not have a hard limit and therefore runs until completion.

If there is less than a minute remaining, 0:0 displays.

FINISH_TIME

The estimated finish time of the job. For done/exited jobs, this is the actual finish time. For running jobs, the finish time is the start time plus the estimated run time (where set and not exceeded) or the start time plus the hard run limit.

* E: The job has an estimated run time that has not been exceeded.

* L: The job has a hard run time limit specified but either has no estimated run time or the estimated run time is more than the hard run time limit.

* X: The job has exceeded its estimated run time and had no hard run time limit set. The finish time displayed is the estimated run time remaining plus the start time.

* A dash indicates that the pending, suspended, or job with no run limit has no estimated finish time.

%COMPLETE

The estimated completion percentage of the job.

* E: The job has an estimated run time that has not been exceeded.

* L: The job has a hard run time limit specified but either has no estimated run time or the estimated run time is more than the hard run time limit.

* X: The job has exceeded its estimated run time and had no hard run time limit set.

* A dash indicates that the jobs is pending, or that it is running or suspended, but has

no run time limit specified.

Note: For jobs in the state UNKNOWN, the job run time estimate is based on internal counting by the job's mbatchd.

RESOURCE USAGE

For the MultiCluster job forwarding model, this information is not shown if MultiCluster resource usage updating is disabled. Use **LSF_HPC_EXTENSIONS="HOST_RUSAGE"** in lsf.conf to specify host-based resource usage.

The values for the current usage of a job include:

HOST

For host-based resource usage, specifies the host.

CPU time

Cumulative total CPU time in seconds of all processes in a job. For host-based resource usage, the cumulative total CPU time in seconds of all processes in a job running on a host.

IDLE_FACTOR

Job idle information (CPU time/runtime) if JOB_IDLE is configured in the queue, and the job has triggered an idle exception.

MEM

Total resident memory usage of all processes in a job. For host-based resource usage, the total resident memory usage of all processes in a job running on a host. The sum of host-based rusage may not equal the total job rusage, since total job rusage is the maximum historical value.

By default, memory usage is shown in MB. Use LSF_UNIT_FOR_LIMITS in lsf.conf to specify a larger unit for display (MB, GB, TB, PB, or EB).

SWAP

Total virtual memory usage of all processes in

a job. For host-based resource usage, the total virtual memory usage of all processes in a job running on a host. The sum of host-based rusage may not equal the total job rusage, since total job rusage is the maximum historical value.

By default, swap space is shown in MB. Use LSF_UNIT_FOR_LIMITS in lsf.conf to specify a larger unit for display (MB, GB, TB, PB, or EB).

NTHREAD
Number of currently active threads of a job.

PGID
Currently active process group ID in a job. For host-based resource usage, the currently active process group ID in a job running on a host.

PIDs
Currently active processes in a job. For host-based resource usage, the currently active active processes in a job running on a host.

RESOURCE LIMITS
The hard resource usage limits that are imposed on the jobs in the queue (see getrlimit(2) and lsb.queues(5)). These limits are imposed on a per-job and a per-process basis.

The possible per-job resource usage limits are:

* CPULIMIT

* TASKLIMIT

* MEMLIMIT

* SWAPLIMIT

* PROCESSLIMIT

* THREADLIMIT

* OPENFILELIMIT

* HOSTLIMIT_PER_JOB

The possible UNIX per-process resource usage limits are:

* RUNLIMIT

* FILELIMIT

* DATALIMIT

* STACKLIMIT

* CORELIMIT

If a job submitted to the queue has any of these limits specified (see bsub(1)), then the lower of the corresponding job limits and queue limits are used for the job.

If no resource limit is specified, the resource is assumed to be unlimited. User shell limits that are unlimited are not displayed.

EXCEPTION STATUS

Possible values for the exception status of a job include:

idle

The job is consuming less CPU time than expected. The job idle factor (CPU time/runtime) is less than the configured JOB_IDLE threshold for the queue and a job exception has been triggered.

overrun

The job is running longer than the number of minutes specified by the JOB_OVERRUN threshold

for the queue and a job exception has been triggered.

underrun
The job finished sooner than the number of minutes specified by the JOB_UNDERRUN threshold for the queue and a job exception has been triggered.

Requested resources
Shows all the resource requirement strings you specified in the bsub command.

Execution rusage
This is shown if the combined RES_REQ has an rusage OR || construct. The chosen alternative will be denoted here.

Synchronous Execution
Job was submitted with the -K option. LSF submits the job and waits for the job to complete.

JOB_DESCRIPTION
The job description assigned by the user. This field is omitted if no job description has been assigned.

The displayed job description can contain up to 4094 characters.

MEMORY USAGE
Displays peak memory usage and average memory usage. For example:

MEMORY USAGE:

MAX MEM:11 Mbytes; AVG MEM:6 Mbytes

You can adjust rusage accordingly next time for the same job submission if consumed memory is larger or smaller than current rusage.

RESOURCE REQUIREMENT DETAILS
Displays the configured level of resource requirement

details. The **BJOBS_RES_REQ_DISPLAY** parameter in lsb.params controls the level of detail that this column displays, which can be as follows:

* none - no resource requirements are displayed (this column is not displayed in the -l output).

* brief - displays the combined and effective resource requirements.

* full - displays the job, app, queue, combined and effective resource requirements.

Requested Network

Displays network resource information for IBM Parallel Edition (PE) jobs submitted with the bsub -network option. It does not display network resource information from the **NETWORK_REQ** parameter in lsb.queues or lsb.applications.

For example:

```
bjobs -l
Job <2106>, User <user1>;, Project <default>;, Status <RUN>;, Queue <normal>,
                     Command <my_pe_job>
Fri Jun  1 20:44:42: Submitted from host <hostA>, CWD <$HOME>, Requested Network
                      <protocol=mpi: mode=US: type=sn_all: instance=1: usage=dedicated>
```

If mode=IP is specified for the PE job, instance is not displayed.

Output: Forwarded job information

The -fwd option filters output to display information on forwarded jobs in MultiCluster job forwarding mode. The following a

CLUSTER

The name of the cluster to which the job was forwarded.

FORWARD_TIME

The time that the job was forwarded.

Output: Job array summary information

Use -A to display summary information about job arrays. The following fields are displayed:

JOBID

Job ID of the job array.

ARRAY_SPEC
Array specification in the format of *name*[*index*]. The array specification may be truncated, use -w option together with -A to show the full array specification.

OWNER
Owner of the job array.

NJOBS
Number of jobs in the job array.

PEND
Number of pending jobs of the job array.

RUN
Number of running jobs of the job array.

DONE
Number of successfully completed jobs of the job array.

EXIT
Number of unsuccessfully completed jobs of the job array.

SSUSP
Number of LSF system suspended jobs of the job array.

USUSP
Number of user suspended jobs of the job array.

PSUSP
Number of held jobs of the job array.

Output: Session Scheduler job summary informationSession Scheduler job summary informationjob summary infor

JOBID
Job ID of the Session Scheduler job.

OWNER
Owner of the Session Scheduler job.

JOB_NAME
The job name assigned by the user, or the command string assigned by default at job submission with bsub. If the

job name is too long to fit in this field, then only the latter part of the job name is displayed.

The displayed job name or job command can contain up to 4094 characters for UNIX, or up to 255 characters for Windows.

NTASKS
The total number of tasks for this Session Scheduler job.

PEND
Number of pending tasks of the Session Scheduler job.

RUN
Number of running tasks of the Session Scheduler job.

DONE
Number of successfully completed tasks of the Session Scheduler job.

EXIT
Number of unsuccessfully completed tasks of the Session Scheduler job.

Output: Unfinished job summary information

Use -sum to display summary information about unfinished jobs. The count of job slots for the following job states is displaye

RUN
The job is running.

SSUSP
The job has been suspended by LSF.

USUSP
The job has been suspended, either by its owner or the LSF administrator, while running.

UNKNOWN
mbatchd has lost contact with the sbatchd on the host where the job was running.

PEND
The job is pending, which may include PSUSP and

chunk job WAIT. When -sum is used with -p in MultiCluster, WAIT jobs are not counted as PEND or FWD_PEND. When -sum is used with -r, WAIT jobs are counted as PEND or FWD_PEND.

FWD_PEND
The job is pending and forwarded to a remote cluster. The job has not yet started in the remote cluster.

Output: Affinity resource requirements information (-l -aff)

Use -l -aff to display information about CPU and memory affinity resource requirements for job tasks. A table with the headin detailed affinity information for each task, one line for each allocated processor unit. CPU binding and memory binding inform display.

HOST
The host the task is running on

TYPE
Requested processor unit type for CPU binding. One of numa, socket, core, or thread.

LEVEL
Requested processor unit binding level for CPU binding. One of numa, socket, core, or thread. If no CPU binding level is requested, a dash (-) is displayed.

EXCL
Requested processor unit binding level for exclusive CPU binding. One of numa, socket, or core. If no exclusive binding level is requested, a dash (-) is displayed.

IDS
List of physical or logical IDs of the CPU allocation for the task.

The list consists of a set of paths, represented as a sequence integers separated by slash characters (/), through the topology tree of the host. Each path identifies a unique processing unit allocated to the task. For example, a string of the form 3/0/5/12 represents an allocation to thread 12 in core 5 of socket 0 in NUMA node 3. A string of the form 2/1/4represents an allocation to core 4 of socket 1 in NUMA node 2. The integers correspond to the node ID numbers displayed in the topology tree from bhosts -aff.

POL
Requested memory binding policy. Eitherlocal or pref. If no memory binding is requested, a dash (-) is displayed.

NUMA
ID of the NUMA node that the task memory is bound to. If no memory binding is requested, a dash (-) is displayed.

SIZE
Amount of memory allocated for the task on the NUMA node.

For example the following job starts 6 tasks with the following affinity resource requirements:

```
bsub -n 6 -R"span[hosts=1] rusage[mem=100]affinity[core(1,same=socket,
exclusive=(socket,injob)):cpubind=socket:membind=localonly:distribute=pack]" myjob
Job <6> is submitted to default queue <normal>.

bjobs -l -aff 6

Job <6>, User <user1>, Project <default>, Status <RUN>, Queue <normal>, Comman
                     d <myjob1>
Thu Feb 14 14:13:46: Submitted from host <hostA>, CWD <$HOME>, 6 Task(s),
                     Requested Resources <span[hosts=1] rusage[mem=10
                     0]affinity[core(1,same=socket,exclusive=(socket,injob)):cp
                     ubind=socket:membind=localonly:distribute=pack]>;
Thu Feb 14 14:15:07: Started 6 Task(s) on Hosts <hostA> <hostA> <hostA> <hostA>
                     <hostA> <hostA>, Allocated 6 Slot(s) on Hosts <hostA>
                     <hostA> <hostA> <hostA> <hostA> <hostA>, Execution Home
                     </home/user1>, Execution CWD </home/user1>;

 SCHEDULING PARAMETERS:
           r15s   r1m  r15m   ut      pg    io   ls    it    tmp    swp    mem
 loadSched  -     -     -     -       -     -    -     -     -      -      -
 loadStop   -     -     -     -       -     -    -     -     -      -      -

 RESOURCE REQUIREMENT DETAILS:
 Combined: select[type == local] order[r15s:pg] rusage[mem=100.00] span[hosts=1
                     ] affinity[core(1,same=socket,exclusive=(socket,injob))*1:
                     cpubind=socket:membind=localonly:distribute=pack]
 Effective: select[type == local] order[r15s:pg] rusage[mem=100.00] span[hosts=
                     1] affinity[core(1,same=socket,exclusive=(socket,injob))*1
                     :cpubind=socket:membind=localonly:distribute=pack]

 AFFINITY:
                     CPU BINDING                     MEMORY BINDING
                     -----------------------         --------------------
```

```
HOST          TYPE   LEVEL  EXCL   IDS          POL   NUMA SIZE
hostA         core   socket socket /0/0/0       local 0    16.7MB
hostA         core   socket socket /0/1/0       local 0    16.7MB
hostA         core   socket socket /0/2/0       local 0    16.7MB
hostA         core   socket socket /0/3/0       local 0    16.7MB
hostA         core   socket socket /0/4/0       local 0    16.7MB
hostA         core   socket socket /0/5/0       local 0    16.7MB
```

See also

bsub, bkill, bhosts, bmgroup, bclusters, bqueues, bhist, bresume, bsla, bstop, lsb.params, lsb.serviceclasses, mbatchd

Parent topic: bjobs